

REMARKS

The Office Action, dated December 31, 2007, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-27 are currently pending in this application, of which claims 1, 13, and 25-27 are independent. In particular, Applicants amended claims 1 and 13-27 to more particularly point out and distinctly claim the subject matter of the present application. It is respectfully submitted that the amendments add no new subject matter to the present application and serve only to place the present application in better condition for examination. Entry of the amendments and reconsideration of the rejected pending claims are respectfully requested. It is believed that all grounds for rejection in the Office Action are currently addressed and that the present application is currently in condition for reconsideration in view of the amendment and the following arguments

The Office Action rejected claims 1-3, 5, 10-15, 17, and 22-27 under 35 U.S.C. §103(a) as being obvious over US Patent Publication No. 2005/0136890 (Lippelt), in view of U.S. Patent No. 5,826,185 (Wise). The Office Action took the position that Lippelt disclosed all of the features of these claims except that the accounting client is configured to send charging update data to the accounting server during the call, and the accounting server is configured to collate the charging update data on the basis of the accounting session identifier, thereby enabling updating of the prepaid credit during the call. The Office Action asserted that Wise disclosed these features. Applicants

respectfully submit that the cited references, taken individually or in combination, fail to disclose or suggest all of the features recited in any of the pending claims.

Claim 1, from which claims 2-12 depend, is directed to a method that includes the establishment of a call between a first terminal and a second terminal is requested. It is ascertained whether any costs generated by accounting clients in the network, and associated with the call, are to be charged against prepaid credit. In the event some or all of the costs are to be charged against prepaid credit, an accounting session is established between an accounting server and the accounting client that will generate the costs to be charged against the prepaid credit, the accounting session being allocated an accounting session identifier. The call is established with the second terminal. Charging update data is sent from the accounting client to the accounting server during the call. The charging update data is collated in the accounting server based on the accounting session identifier, thereby enabling updating of the prepaid credit during the call, wherein the charging update data includes the accounting session identifier.

Claim 13, from which claims 14-24 depend, is directed to a network that includes a requesting unit configured to accept a request from a first terminal for establishment of a call between the first terminal and a second terminal. In the network, an ascertaining unit is configured to ascertain whether any costs generated by accounting clients in the network, and associated with the call, are to be charged against prepaid credit. In the event some or all of the costs are to be charged against prepaid credit, a first establishing unit establishes an accounting session between an accounting server and an accounting

client that generates the costs to be charged against the prepaid credit, the accounting session being allocated an accounting session identifier. A second establishing unit is configured to establish the call with the second terminal. The accounting client is configured to send charging update data to the accounting server during the call. The accounting server is also configured to collate the charging update data on the basis of the accounting session identifier, thereby enabling updating of the prepaid credit during the call, wherein the charging update data includes the accounting session identifier.

Claim 25 is directed to a system that includes requesting means configured for requesting establishment of a call between a first terminal and a second terminal. An ascertaining means for ascertains whether any costs generated by accounting clients in the network, and associated with the call, are to be charged against prepaid credit. A first establishing means establishes, in the event some or all of the costs are to be charged against prepaid credit, an accounting session between an accounting server and the accounting client that will generate the costs to be charged against the prepaid credit. The accounting session is allocated an accounting session identifier. A second establishing means establishes the call with the second terminal. A sending means sends charging update data from the accounting client to the accounting server during the call. A collating means collates the charging update data in the accounting server based on the accounting session identifier, thereby enabling updating of the prepaid credit during the call, wherein the charging update data includes the accounting session identifier.

Independent claim 26 is directed to an apparatus that includes an establishing unit configured to establish an accounting session with an accounting client that will generate the costs to be charged against prepaid credit during a call, the accounting session being allocated an accounting session identifier. A receiver is configured to receive charging update data from the accounting client during the call. A collating unit is configured to collate the charging update data based on the accounting session identifier, thereby enabling updating of the prepaid credit during the call, wherein the charging update data includes the accounting session identifier.

Claim 27 is directed to an apparatus that includes an establishing unit configured to establish an accounting session with an accounting server that will generate the costs to be charged against prepaid credit during a call, the accounting session being allocated an accounting session identifier. A transmitter is configured to send charging update data to the accounting server during a call for collation by the accounting server based on the accounting session identifier, thereby enabling updating of the prepaid credit during the call, wherein the charging update data includes the accounting session identifier.

As described in prior responses, certain embodiments of the present invention provide for online charging of prepaid accounts with the ability to update charging data during a call. Thus, it is possible to update ongoing accounting sessions, manage online chargeable events, or manage change in charging tariff. Advantageously, this means that post and prepaid mechanisms are distinguished and this decreases the signaling load, and

the amount of logical functionality needed in the server side is decreased (see page 2, line 29 - page 3, line 19, and page 15, lines 9 - 14 of the present application).

By including the accounting session identifier in the charging update data, each accounting session has a unique identification. Thus, each accounting session can be identified and processed. For example, according to one embodiment of the present invention (e.g. see page 10, lines 2 to 6 of the present application), the charging update data is collated based on the global session ID, which allows the combining of different accounting sessions, but still permits identification of each unique accounting session. Applicants submit that each of the above claims recites features that are neither disclosed nor suggested in any of the cited references.

As discussed in previous correspondence, Lippelt discloses a charging method for a communication service, particularly a prepaid communications service, in a communications system. A prepaid service processing node (PSPN) processes a communications service. A prepayment support node (PPSC) administers a prepaid service account. A prepayment support node information (PI) is received from a subscriber profile database (SPD) and a prepayment support node address (PA) is determined from the prepayment support node information (PI). A request for the communications service to be charged on a subscribers prepayment account is detected and a credit information request is sent to the PPSC, which then responds with a credit information message.

The credit information may be a time value or a traffic volume (see paragraph 0026). The credit can be deducted from the prepaid service account by the PPSC in a step wise fashion, for instance in blocks of one minute, such that the risk is minimized to an unpaid air time of one minute if the account becomes empty (see paragraph 0028). Therefore, the PSPN is granted a credit value of one minute by the PPSC in response to a credit information request, and when this credit is below a certain threshold another credit information request message must be sent.

The Office Action admitted that Lippelt does not disclose sending charging update data from the accounting client to the accounting server during the call. The communications system of Lippelt operates by merely providing a credit value to the service processor PSPN which then consumes the value either in discrete steps or continuously. Indeed, Lippelt only discloses sending a message from the PSPN to the PPSC which is a credit information request message. The credit information request message does not include charging update data.

The Office Action further admitted that Lippelt does not disclose collating the charging update data in the accounting server based on the accounting session identifier, thereby enabling updating of the prepaid credit during the call. The reference parameter (RT), which is part of the credit information request message or the credit information message, is used to identify those messages and identify a charging transaction (see page 17, lines 1 to 6). Neither of these messages includes charging update data. Furthermore, since Lippelt does not send charging update data in the credit information request, neither

does Lippelt disclose providing charging update data including an accounting session identifier. Therefore, these messages cannot be used to collate the charging update data.

Applicants respectfully submit that the cited references fail to disclose or suggest at least the features of “sending charging update data from the accounting client to the accounting server during the call,” and “collating the charging update data in the accounting server based on the accounting session identifier, thereby enabling updating of the prepaid credit during the call, wherein the charging update data includes the accounting session identifier” as recited in the independent claims. More specifically, Applicants submit that Wise fails to cure the admitted deficiencies of Lippelt.

Wise discloses a cellular phone system in which a cellular phone user has a predetermined amount of available airtime. The cellular phone user prepays for a particular number of airtime units. When a cell site receives a call from the cellular phone user, the cell site communicates with a mobile telecommunications switching office, which recognizes a unique serial number from the cellular phone. The mobile telecommunications switching office directs the call to a prepaid airtime transaction tracking interface PATTI. The PATTI then checks whether the cellular phone user account has any available airtime units and may indicate the number of units to the cellular phone user. If there are no airtime units, the PATTI does not answer the call, otherwise the PATTI connects the call and deducts airtime units until the call is disconnected.

The Office Action asserts that the recited features of “sending charging update data from the accounting client to the accounting server during the call” and “collating the charging update data in the accounting server based on the accounting session identifier thereby enabling the updating of the prepaid credit during the call wherein the charging update data includes accounting session identifier” is disclosed in the teachings of Wise. In particular, the Office Action alleged that Wise at Figure 2e and column 4, lines, 27 to 44, is relevant to these features. Applicants respectfully urge that Wise fails to disclose either feature there is no disclosure of sending charging update data from the accounting client to the accounting server in these parts of Wise.

As an initial note, Applicant suggest that the Office Action failed to indicate which part of the Wise is the recited “accounting client” and the “accounting server.” Nevertheless, it appears to the Applicants that the Office Action identified the PATTI system in Wise and the associated cellular database as the accounting server. Although Wise discloses account information is determined from the four digits of a direct inward dial, it is respectfully submitted that Wise fails to disclose an accounting client with which the accounting server interacts, as recited in the independent claim of the present application. Instead, Wise only discloses that all the accounting procedures are carried out in the PATTI system and wholly within the accounting server, in contrast to the above-noted recitations of the pending claims.

Although not asserted, even if the Office Action identifies the cellular telephone user 12 of wise to be the “accounting client,” this interpretation also does not disclose the

recitations of the independent claims. For example, in Wise, no account information or charging information is passed between the cellular telephone user and the PATTI system or the cellular database.

Referring, for example, to claim 1, the pending independent claims recite that the charging update data is received at the accounting server, having been sent from the accounting client, and that the charging update data comprises the accounting session identifier. As summarized above, Applicants urge that Wise does not disclose or suggest no such recitations.

For example, Wise fails to disclose providing an “accounting session identifier.” More specifically, Wise discloses that account information is determined from the four digits received in a direct inward dial (DID) telephone cellular phone. See column 3, lines 15 to 16. In other words, Wise suggests that a user calls the PATTI system and the account information is derived from the incoming calling number. However, Wise fails to disclose any further account identification after this procedure. Therefore, Wise cannot provide an accounting session identifier in charging update data because there is no disclosed account session identifier, as recited in the current claims. Moreover, the real time function and in particular the periodic recheck of Wise, (to which the Office Action refers) does not involve determining account information, or using direct inward dial numbers from which the account information is derived as recited in the pending claims. Furthermore, Wise fails to disclose or suggest the recitation of providing an accounting session identifier.

Even if Wise discloses an account session identifier (is not admitted), Wise does not disclose or suggest the recitation that charging update data is sent from the cellular phone user to the PATTI system (the accounting system). As noted above, the Office Action cites to Wise at column 4, lines 27 to 44, as relevant to charging update data. However, this passage merely states that “a periodic recheck is made to see if a cellular phone user has minutes remaining” (e.g. see column 4, lines 40 to 42). It is respectfully submitted that a periodic recheck to see if a cellular phone user has minutes remaining is not charging update data. Furthermore, the periodic check is only carried out in the PATTI system. In this way, Wise teaches that the PATTI system manages the account information and updates the cellular database accordingly (see column 4 line 40).

Therefore, while Wise discloses that a cellular phone user’s account may be checked to see if there are any remaining minutes for a particular call, the real time function to which the Examiner refers is not an interaction between an accounting server and any alleged accounting clients. For example, the microprocessor 50 in the PATTI is carries out the procedure set out in the software flowcharts Figs 2(a) to 2(m) (column 3, lines 59 to 61). Moreover, Wise, such as in the sections cited in the Office Action, does not even suggest sending information two network elements as recited in the pending claims, let alone charging update data between an accounting server and an accounting client.

The Office Action alleged that active updating of the prepaid balance to be equivalent to the recitation of sending charging update data from the accounting client to

the accounting server during a call. Again, applicants urge that Wise just does not disclose this feature. Wise only attempts to prevent a user with too little credit continuing a call.

For example, Wise does not envisage situations wherein the tariff exchanges during an established session. Instead, Wise explicitly states that a roaming restriction is placed on the cellular phone to prohibit the cellular phone user from placing calls outside the home area (see column 2, lines 24 to 26). Therefore, Wise simply does not address the problem of updating charging data (e.g. managing different charging parameters during a call).

Furthermore, Applicants respectfully submitted that costs to be charged against a prepaid credit are separate and distinct from charging update data. Therefore, charging update data is different from updating a cellular phone user's account balance. Indeed, the charging update data as defined by the independent claims relates to data which updates the charging scenarios e.g. changes to the tariffs during a call. *See, for example*, page 14, lines 29 to 30 of the present application.

For at least the reasons presented above, Wise fails to disclose sending charging update data from account client to an account server during a call. As discussed above, Wise only disclosed updating the prepaid balance during a call, which is similar to the teaching of Lippelt. For example, at column 4, lines 50 to 51, Wise discloses that units are deducted from the cellular phone user's account, and this function is clearly different from sending charging update data, as recited in the pending claims.

In addition, Applicants submit that the cited references fail to disclose or suggest at least the feature of “the charging update data includes the accounting session identifier”, as recited in claims 1, 13 and 25-27. As mentioned previously, Wise is silent on providing the feature of sending charging update data from the accounting client to the accounting server. Applicants further submit that Wise is silent regarding including an accounting session identifier.

In conclusion, as discussed above, Lippelt does not disclose or suggest providing charging update data including the accounting session identifier during the call. Lippelt merely describes that the only information which is sent from the PPSC (which manages prepaid accounts of subscribers) to the PSPN (which processes prepaid services) is the credit information request message, or the credit information message. Thus, none of the parameters in the message relate to charging update data during an on-going call. As discussed above, by including the accounting session identifier in the charging update data, each accounting session has a unique identification. This means that each accounting session can be identified and processed. This feature is neither disclosed nor suggested in any of the cited references.

While the Office Action alleged that Wise addresses these deficiencies, Applicant respectfully submit that, at most, Wise discloses information is sent during a periodic update check from a cellular database to the microprocessor, both of which are part of the PATTI system. In this way, Wise does not anticipate any of the pending claims of the present invention. Still further, Applicants respectfully submit that since Wise does not

even mention situations wherein the tariff changes during an established session, one skilled in the art would understand that the balance of a prepaid subscriber would merely be adjusted during a call in a similar fashion to Lippelt.

Applicants further submit that because claims 2-3, 5, 10-12, 14, 15, 17, and 22-24 depend from claims 1 and 13, these claims are allowable at least for the same reasons as claims 1 and 13, as well as for the additional features recited in these dependent claims.

Based at least on the above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the features recited in claims 1-3, 5, 10-15, 17, and 22-27. Accordingly, withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claims 4 and 16 under 35 U.S.C. 103(a) as being obvious over Lippelt and Sami, in further view of US Patent No. 6,496,690 to Cobo (Cobo). The Office Action took the position that Lippelt and Wise disclosed all of the features of these claims except that the accounting client is one of SGSN/GGSN, S-CSCF/P-CSCF and a network application server. The Office Action asserted that Cobo disclosed this feature. Applicants submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in any of the above claims. Specifically, Lippelt and Wise are deficient at least for the same reasons discussed above, and Cobo fails to cure these deficiencies.

Cobo is directed to providing pre-paid subscriber service to a mobile subscriber in an integrated wireless network having a circuit-switched portion and a packet-switched

portion. A prepaid subscriber class is sent to a SGSN, or to a GGSN when the packet-switched portion registers with the network. See col. 4 lines 65 – col. 5 line 16. However, Applicants respectfully submit that Cobo fails to cure the significant deficiencies of Lippelt and Wise discussed above.

Based at least on the above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the features recited in claims 4 and 16. Accordingly, withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claims 6-9 and 18-21 under 35 U.S.C. 103(a) as being obvious over Lippelt and Sami, in further view of US Patent No. 6,947,724 to Chaney (Chaney). The Office Action took the position that Lippelt and Sami, disclosed all of the features of these claims except establishment of the call is made via a session initiation protocol (SIP). The Office Action asserted that Chaney disclosed this feature. Applicants respectfully submit that the cited references fail to disclose or suggest all of the features recited in any of the above claims. Specifically, Lippelt and Wise are deficient at least for the reasons discussed above, and Chaney fails to cure these deficiencies.

Chaney is directed to billing a call placed by a user, based on the reported traffic load. According to Chaney, in a SIP network, users register their existence on a sub-network through a Call State Control Function (CSCF). Each user has a SIP ID which is an address which follows the user to different terminals. According to one example,

when a user sits at his office desk he/she can register as being at this desk. The desk phone then sends a SIP REGISTER message with the user's SIP ID to the CSCF, so that the user's calls can be routed. However, Applicants respectfully submit that Chaney fails to cure the significant deficiencies of Lippelt and Wise discussed above.

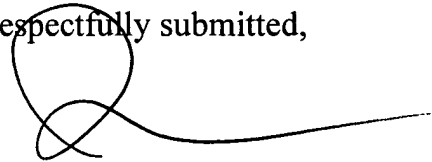
Based at least on the above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the features recited in claims 6-9 and 18-21. Accordingly, withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

Applicants respectfully submit that each of claims 1-27 recite features that are neither disclosed nor suggested in any of the cited references. Accordingly, it is respectfully requested that each of claims 1-27 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

A handwritten signature in black ink, consisting of a large, stylized loop followed by a long, horizontal stroke that tapers off to the right.

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